

Appl. No. 10/056,300
Reply to Office Action of January 25, 2006

REMARKS:

Applicant appreciates the thorough examination of the application that is reflected in the Office Action dated January 25, 2006. Applicant also appreciates the indication that the rejections of claims 10 and 13-18 under 35 U.S.C. 102 (e) as being anticipated over Chau et al. (US 2002/0123993) have been withdrawn. Applicant amends claims 1, 7 and 9 to change each occurrence of the term "document" to "web page," and amends claims 10, 14 and 15 to change each occurrence of the terms "content," "source," and "content source" to "web page." To correct a typographical error, Applicant also amends independent claims 1 and 10 to insert "and" in claim 1 and to delete "and" in claim 10. Applicant cancels claim 13 without prejudice or disclaimer. Claims 1, 2-10 and 14 -18 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

Art-based Rejections

Claim 1

The Official Action maintains the rejection of claims 1-4 and 6-9 under 35 U.S.C. 102 (e) as being anticipated by Chau et al. (US 6,721,727) (hereinafter the "Chau reference"). Applicant respectfully traverses these rejections for at least the following reasons.

Claim 1 relates to a computer-based method for extracting specific content from a web page comprising content. Claim 1 requires the steps of:

creating a set of selection envelopes, wherein each selection envelope is associated with at least one selection command for locating a particular portion of said content within said web page, wherein each selection command is a function configured to locate the particular portion of said content to be enclosed by a corresponding selection envelope, wherein each successive selection command narrows said content to be enclosed by a corresponding selection envelope corresponding to the selection command; and

applying each selection command and its corresponding selection envelope to said content until said specific content from said web page is enclosed in a particular one of the selection envelopes. (Emphasis added.)

The Chau Reference

The Chau reference relates to a technique for creating metadata for fast search of XML documents stored as column data. Specifically, as discussed in the Abstract of the Chau reference, data is stored in a data store connected to a computer. A main table is created in a

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relational database management system, wherein the main table has a column for storing an extensible markup language (XML) document in a native XML format. One or more side tables are created in the relational database management system, wherein each side table has one or more columns that store one or more attributes extracted from the XML document for fast searching of the XML document. Thereafter, the side tables are used to locate data in the main table. (Abstract of the Chau reference; Emphasis added.)

1. *The Chau reference fails to disclose a selection envelope that is “associated with at least one selection command ... for locating said specific a particular portion of said content within said web page,” as required by the method of claim 1.*

In rejecting claim 1, the Office Action cites column 24, lines 49-58 of the Chau reference which discusses that:

“D.12 Searching an XML Document

The above sections have described how the XML System may be used as a document repository for storage and retrieval, as well as for element or attribute selection. Here, searching using indices created on side table columns, which contain XML element contents or attribute values extracted from XML documents, is illustrated. Since the data type of an element or attribute can be specified, searches can be performed on SQL general data types and range searches can be performed.” (Emphasis added.)

Applicant submits that although the Chau reference discloses using the data type of an element or attribute to extract XML attribute values, nothing in the Chau reference teaches, for example, that a “selection envelope” is “associated with at least one selection command ... for locating said specific a particular portion of said content within said web page,” as required by the method of claim 1. This teaching in the Chau reference merely discusses using information in side table columns to locate information in an XML document. For at least this reason, the rejection based on the Chau reference is improper and should be withdrawn.

2. *The Chau reference fails to disclose that “each successive selection command narrows said content to be enclosed by a corresponding selection envelope,” as recited in claim 1.*

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In rejecting claim 1, the Office Action cites column 23, line 35, column 25, line 5 and column 43, line 4 of the Chau reference as teaching that "each selection command is a function configured to locate the particular portion of said content to be enclosed by a corresponding selection envelope, wherein each successive selection command narrows said content to be enclosed by a corresponding selection envelope corresponding to the selection command." Applicant respectfully disagrees.

Column 23, line 35 of the Chau reference discusses that:

D.10 Updating XML Documents

With the XML System, an entire XML document can be updated by replacing the XML column data. The XML System provides two techniques for update:

Using cast functions or storage UDFs in the set clause of the SQL update statement:

In this case, a cast function or a UDF is used in the Set clause. Here is an example:

```
UPDATE sales_tab
```

```
set order=XMLVarcharFromFile('/home/ul/xml/order2.xml')
```

```
WHERE sales_person='Sriram Srinivasan'
```

Using the Update() UDF:

The XML System provides a UDF Update() which allows a user to specify a location path and the value of the element or attribute represented by the location path to be replaced. In this case, a user does not need to retrieve the XML document and use an editor to change the content. The XML System will do it automatically.

Here is an example of using the UDF Update(). In this example, the content of "/Order/Customer" is updated to NewMart".

```
UPDATE sales_tab set
```

```
order=Update(order, '/Order/Customer', 'NewMart')
```

```
WHERE sales_person='Sriram Srinivasan'
```

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For an XML column, the XML System will update side tables of extracted data when the XML column is updated. However, a user should not update these side tables directly without updating original XML documents stored in the XML column by changing the corresponding XML element or attribute value. Otherwise, there may be data inconsistency problems." (Emphasis added.)

Column 25, line 5 of the Chau reference discusses that:

The following example SQL statement will return the sales_persons of the sales_tab who have line item orders stored in the column order where the ExtendedPrice is greater than \$2500.00.

```
SELECT sales_person FROM sales_order_view
```

```
WHERE price>2500.00
```

Column 43, line 4 of the Chau reference discusses that:

The element SQL_stmt is designed to allow simple and direct mapping from relational data to one or more XML documents through a single SQL statement. It is useful for the composition when application programmers know exactly what data they want to select from a database and compose the one or more XML documents. (Emphasis added.)

The Chau reference discloses a technique for updating an entire XML document by replacing XML column data. The UDF Update () function allows a user to specify a location path and the value of the element or attribute represented by the location path to be replaced. However, Applicant submits that the Chau reference does not teach that each successive selection command narrows said content to be enclosed by a corresponding selection envelope corresponding to the selection command," as recited in amended claim 1. There is no indication in the Chau reference that each successive attribute entry in a side column for fast searching of the XML document "narrows said content to be enclosed by a corresponding selection envelope corresponding to the selection command," as recited in amended claim 1. The Chau reference does not even remotely hint at this concept.

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3. *The Chau reference fails to disclose "applying each selection command and its corresponding selection envelope to said content until said specific content from said source web page is enclosed in a particular one of the selection envelopes," as recited in claim 1.*

For at least the same reasons noted above, Applicant submits that the Chau reference does not teach "applying each selection command and its corresponding selection envelope to said content *until said specific content from said source web page is enclosed* in a particular one of the selection envelopes," as recited in amended claim 1.

Accordingly, for at least the foregoing reasons, Applicant submits that claim 1, and its dependent claims 2-4 and 6-9, are patentable over the Chau reference. In addition, Applicant submits that many of the dependent claims are separately patentable since the Chau reference fails to teach recitations present in those claims.

Claim 5

The Official Action rejects claim 5 under 35 U.S.C. 103(a) as being unpatentable over Chau et al. in view of Copperman et al. (USPN 6,711,585).

Applicant respectfully traverses this rejection for at least the following reasons.

In rejecting claim 5, the Office Action cites column 23, lines 54-67 of the Copperman reference as allegedly teaching that "said child envelope partially overlaps said parent envelope." Applicant respectfully disagrees. Column 24, lines 49-58 of the Chau reference discusses that:

Overlap occurs when two root nodes are provided that are actually identical or nearly identical. In effect, the root concept-nodes are synonyms, and taxonomies generated from them would cover substantially the same portion and aspect of the knowledge domain. For example, the root nodes "Geography--The World" and "Nationality" may, for a given knowledge domain, turn out to be overlapping concepts. If all or most of the terms ascribed to two taxonomies overlap (i.e., they are ambiguous terms), then the taxonomies are non-discrete and are preferably combined into a single root node. If overlap is found, the input set of concept-nodes should be fixed and the knowledge map generation process re-initiated. (Emphasis added.)

Thus, while the Copperman reference teaches the concept of overlapping concepts or overlapping taxonomies, Applicant submits that the Copperman reference does not teach either the concept of a "child envelope" or a "parent envelope," much less that "said child envelope

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partially overlaps said parent envelope," as required by the method of claim 5. Accordingly, for at least the foregoing reasons, Applicant submits that dependent claim 5 is patentable over the Chau reference in view of Copperman reference.

Claim 10

The Official Action rejects claims 10 and 13-18 under 35 U.S.C. 103 (a) as being unpatentable over Chau et al. (US 6,721,727) (hereinafter the "Chau reference").

Applicant respectfully traverses these rejections for at least the following reasons.

Claim 10 relates to a computer-based method for extracting desired content from a web page. Claim 10 requires the steps of:

parameterizing a plurality of selection commands to operate on said web page, wherein each selection command is a function configured to locate a particular portion of content within said web page to be enclosed by a corresponding selection envelope, wherein each successive selection command narrows the particular portion of said web page to be enclosed by the selection envelope corresponding to the selection command; defining a parent selection envelope corresponding to a first selection command for locating a first content within said web page;

using the first selection command associated with the parent selection envelope to select first content from said web page;

determining whether said first content is said desired content;

extracting said first content if said first content is said desired content;

defining a child selection envelope corresponding to a second selection command for locating second content within said web page if said first content is not said desired content;

using the second selection command associated with said child selection envelope to select the second content from said web page;

determining whether the second content is said desired content; and

extracting the second content if the second content is said desired content.

(Emphasis added.)

1. *The Chau reference fails to disclose "parameterizing a plurality of selection commands to operate on said web page, wherein each selection command is a function configured to locate the particular portion of content within said web page to be enclosed by a corresponding selection envelope, wherein each successive selection command narrows the particular portion of said web page to be enclosed by the selection envelope corresponding to the selection command," as recited in claim 10.*

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In rejecting claim 10, the Office Action does not address this step of claim 10. Applicant sees no disclosure of this concept in the Chau reference. Accordingly, Applicant submits that the Chau reference fails to teach this limitation of claim 10.

2. *The Chau reference fails to disclose "defining a parent selection envelope corresponding to a particular one of the selection commands for locating a first content within said web page," or "defining a child selection envelope corresponding to a second selection command for locating second content within said web page if said first content is not said desired content," as recited in claim 10.*

In rejecting claim 10, the Office Action acknowledges that the Chau reference fails to explicitly disclose "determining whether said first content is said desired content; extracting said first content if said first content is said desired content; defining a child selection envelope corresponding to a second selection command for locating second content within said web page if said first content is not said desired content; using the second selection command associated with said child selection envelope to select the second content from said web page; determining whether the second content is said desired content; and extracting the second content if the second content is said desired content." However, the Office Action cites column 24, lines 20-47 of the Chau reference as allegedly teaching these limitations. Column 24, lines 20-47 of the Chau reference discusses that:

"D.11 Retrieving XML Element Contents and Attribute Values

For XML columns, the XML System provides a UDF to extract element or attribute values from entire XML documents. The retrieval is performed on an XML document. It is a single document search. The XML System provides extracting UDFs to retrieve XML elements or attributes in the SQL select clause. This is very useful after search filtering on a collection of XML documents to further obtain desired elements or attributes.

Suppose there are more than 1000 XML documents stored in the column order in the table sales_tab. To find all customers who have ordered items which have the ExtendedPrice greater than \$2500.00, the following SQL statement with the extracting UDF in the select clause can be used:

```
SELECT extractVarchar(Order,'/Order/Customer') from sales_order_view
```

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WHERE price>2500.00

where the UDF extractVarchar() takes the order as the input, and the location path "/Order/Customer" as the select identifier, and returns the names of the customer. Note, in this statement, only the orders with ExtendedPrice greater than \$2500, say maybe 11 such orders, will be the input to the extracting function. The WHERE clause did the filtering on the collection of 1000 XML documents already. Again, the sales_order_view is the default view to join the application table sales_tab and all its side tables, where price is the part_tab.price, representing the "/Order/Part/ExtendedPrice"." (Emphasis added.)

Although the Chau reference teaches a UDF that can extract element or attribute values from entire XML documents, an XML document is not a web page. For at least this reason, Chau's broad disclosure of UDFs to retrieve XML elements or attributes in the SQL select clause does not teach, for example, "defining a child selection envelope corresponding to a second selection command for locating second content within said web page if said first content is not said desired content." For at least the same reasons, Applicant submits that the Chau reference also fails to teach, for example, "using the second selection command associated with said child selection envelope to select the second content from said web page," as recited in the method of claim 10.

Accordingly, for at least the foregoing reasons, Applicant submits that claim 10, and its dependent claims 14-18, are patentable over the Chau reference. In addition, Applicant submits that many of the dependent claims are separately patentable since the Chau reference fails to teach recitations present in those claims.

For at least the reasons noted above, Applicant submits that all of the pending claims are allowable and such allowance is respectfully requested. Should the Examiner have any questions or wish to further discuss this application, Applicant requests that the Examiner contact the undersigned attorney at (480) 385-5060.


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If for some reason Applicant has not requested a sufficient extension and/or has not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

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